

5 Maintaining Eye-Contact in Teleconferencing Using Structured Light

ABSTRACT

10 The invention comprises a structured light projector, a video camera, and an image processor, for achieving perspective corrected images that enhance eye-contact during teleconferencing. A structured light projector is offset in one direction from the monitor center, and illuminates a local participant with a
15 structured light pattern. The image of the local participant, illuminated by both ambient and structured light, is captured by the video camera, also offset from the monitor center, preferably in the direction opposite the structured light projector. By considering the distortion of the structured light observed from the position of the video camera and the position of the structured light
20 projector and video camera relative to the monitor center, an image processor creates an image of the local participant as viewed from a perspective that, when viewed by the remote participant, provides a sense of eye contact with the local participant.